



# Killifish - The eBook

Care And Selected Species Guide

1<sup>st</sup> Edition

by

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## **Introducing Killifish**

Killifish are egg laying toothcarps, as opposed to livebearing toothcarps which includes the Mollies, Platies, Guppies etc. The word Killifish is derived from a Dutch word meaning ditch or channel. It does not mean that Killifish are killer fish. Most Killifish are around 2 inches long, some much bigger and some slightly smaller. There are several groups or types of Killifish which include African Annuals, African Non-Annuals, Eurasian (Non-Annuals), New World Non-Annuals and South American Annuals and Non-Annuals.



*Nothobranchius guentheri An African Annual*

Annuals denotes fish who inhabit temporary bodies of water that are prone to completely dry up during the dry season. The Annual Killifish have evolved a method to keep their species alive through the dry season by laying eggs in the soil that delay their hatching until the water returns with the wet season. The incubation period for these eggs can be as long as 2 years but usually it is somewhere between 2 and 6 months. The lifestyle of these fish are naturally short and furious, they have to hatch with the rains, grow to maturity and lay plenty of eggs before the dry season returns. So their growth rate is extremely fast and most will reach maturity within 2 or 3 months, some as little as 5 weeks.

The Non-Annuals are egg hangers, that is they lay their eggs among plants and roots and have an incubation period of between 10 days and 1 month, averaging about 14 days. Most Non-Annuals also have the ability to lay eggs that will survive a short dry period just like the Annuals. Non-Annuals have a longer and less hurried lifestyle, their maturity might take as long as 6 months.

Most Killifish will do fine at room temperature, around 70° (F), they will be happy in as little as 1 gallon per pair and have no need for extra lighting or filters. They do prefer live or frozen foods and their reproduction is a much more labor intensive chore for the hobbyist. They do require clean water and they will do much better with a teaspoon of salt per gallon added to their water to prevent diseases. They are somewhat rare in petshops because the large fish farms are not able

to mass produce Killifish like they can with most other aquarium fish. Killies spawn daily but lay only a few eggs, unlike other fish who lay all their eggs at one time.

Killies are some of the most beautiful freshwater fish in the world. And well worth the extra effort it takes to reproduce them in captivity.

## **Killifish Spawning Methods**

### **Soil Spawning Killies**

1. The most popular method is simply to keep a pair together in a 1 to 2 1/2 gallon tank with boiled peat moss as a spawning medium. This is usually successful and many people never vary from this method.
2. A variation of method 1 in which 3 or more pairs or trios are set-up in a 5 gallon or similar sized tank. Never keep 2 males in a small tank, to prevent fighting it is better to have at least 3 males present.
3. A variation of method one. In this set-up you separate the male and female for a week or so and then introduce them into a spawning set-up (1) as described above. In this set-up you would only leave the breeders in the tank for 1 or 2 days, not feeding the fish at all during the time they are in the spawning tank. The advantages in this method is that it doesn't pollute the tank or the peat moss, it allows the female to build up a good quantity of eggs and it allows the female to recuperate from the constant attentions of the male.
4. A slight variation of the above methods where the peatmoss medium is put in a small glass jar or plastic container instead of covering the entire bottom of the tank.

### **Plant Spawning Killies**

1. Variation number 1 is a permanent set-up, with a well planted tank. A pair of Killies will spawn and fry will appear on their own. You can allow the fry to remain in the tank with the adults or remove them for separate rearing. This a quite successful set-up for about 50% of plant spawning Killies. This method works exceptionally well with the Gardneri, Bivs and Epiplatys.
2. A variation of method 1 in which the adults are removed and the fry are allowed to grow up in the spawning tank. The advantages in this method is that fry predation by the adults is eliminated. One would usually leave the adults in the tank for up to 3 weeks and then remove them. This is a very good method to use with Blue Gularis and other Fundulopanchax.
3. In method 3 a spawning mop is used. A spawning mop is a "mop" made of synthetic yarn in which the adults will deposit eggs. The eggs are picked off the mop by hand or tweezers and placed into a small container of water to incubate.
4. As in method 3 but the eggs are placed on top of wet peat moss for incubation. The advantage here is there is a much less likelihood of the eggs getting fungused. Eggs on peat usually take at least a week longer to develop than eggs in water. Another advantage of this method is that all the eggs are placed into a fry tank at the same time, and the eggs will all hatch at the same time

thus you will have all the fry at approximately the same size throughout their growth period. This is an excellent method to use with Australes.

5. A variation of method 3 in which the whole egg laden mop is semi-dried, placed into a plastic bag and incubated for 3 weeks. This method has many of the same advantages of method 4. 6.

Most if not all plant spawning Killifish can be successfully spawned in any of the methods presented for soil spawners. The incubation period for plant spawners is usually 3 to 5 weeks for semi-dry incubation.

### **Switch Spawning Killies**

Switch spawning Killies can be successfully spawned with any of the above methods.

## **Plant Spawning Killifish**

Plant Spawning Killifish are usually spawned in one of two main methods, the Natural Method and The Mop Method.

### **The Mop Method**

The Mop Method uses a mop made of about 25 to 50 strands of yarn tied together, sometimes with a cork or some other kind of floatation device attached. Conditioned breeders are added along with a mop or two to an otherwise bare tank and left for a period of about two weeks. The eggs are picked daily, off the strands of yarn, carefully by hand, and placed in a small covered container such as a petri dish or well cleaned baby food jar. Watch the eggs and remove any that might fungus up, to prevent contaminating the other eggs. In a few days you will notice the eggs beginning to "eye up", develop. They should be ready to hatch in about two weeks.

The individual fry have the inconvenient habit of hatching at slightly different times, so it might be a weeks difference between the time when the first fry hatches and the last fry hatches. The fry are placed into a rearing tank of their own and fed small live foods such as baby brine shrimp and /or micro worms from the first day. They can be gradually weaned over to other more conventional foods such as flakes, freeze dried and frozen fare starting at about one month of age.

### **The Natural Method**

The Natural Method is a lot easier than the Mop Method. The only drawback being that a lot of the Plant Spawning Killifish are ferocious fry eaters and won't allow much success with this method.

To set up a pair or group of Killifish for the Natural Method you need a well planted tank preferably with an under gravel filter or other gentle type filter. Just allow the breeders to do what comes naturally. In about 2 weeks you should be seeing some fry swimming around. You can leave them in the tank with the adults or remove them to a rearing tank of their own. Or a third possibility is to remove the adults to a new spawning tank and allow the fry to grow in this tank. This natural spawning tank needs to get a shot of baby brine shrimp or microworms every day for maximum success. This is a treat for the adults but almost a necessity for the fry.

## **Soil Spawning Killifish**

Killifish are different than most other Aquarium fish in that the females lay a few eggs every day, as opposed to a lot of eggs at one time. Therefore you usually allow them to remain in the spawning tank for about 2 weeks before you collect the eggs.

### **Miracle Fish**

Soil Spawning Killifish are unique in their spawning methods. In the wild these fish live in temporary pools of water that form in the wet, or rainy, seasons of Africa and South America. When the wet season is over the pools dry up. The way these fish survive this is to grow quickly and lay eggs in the mud while the water is still available. When the dry season comes the pools completely dry up but the eggs remain viable deep in the mud until the return of the wet season. Then the eggs hatch and the whole process begins again. These fish have miraculously adapted to this lifestyle and thus the species have survived.

The typical spawning set-up for soil spawning Killifish would be a 2 gallon drum bowl, good clean water, well fed and conditioned breeders, and some peat moss. The best peat moss would probably be the peat pellets you can find at most Garden Centers. If not then you can use regular peat moss that comes in large bales, but it will need to be boiled before using it, to kill any microorganisms that might be present and to make it sink more readily. A variation of this spawning method would be the use of a larger tank such as a 10 gallon tank, in which you place a smaller vessel to hold the peat material (example above). Don't worry the breeders will usually find the peat, wherever it is placed.

Once the spawning tank is set up, you add the breeders. Usually it is best to have 2 females for 1 male. The males tend to be treat the females pretty rough if only 1 female is present. And it's always best to use only one male at a time so that he will spend more time spawning instead of sparring with a rival.

It's best to feed the breeders only live food if possible while they are in the spawning tank. Old

rotting food will contaminate the eggs very quickly. If no live food is available then feed very sparingly.

After about 2 weeks you can collect the eggs. The eggs will be buried and hidden in the peat moss so it's always a guess as to how many eggs are actually there. Just collect all the peat moss with a fine meshed net. Gently squeeze most of the water out and place the ball of peat on a paper towel for further drying. It should end up moist but not dripping wet. After its dried to your satisfaction place the peat ball into a plastic sandwich bag or something similar for storage.

The incubation times vary from about 2 weeks to 6 months. You'll have to find out what the incubation period for your particular species is, but a good compromise for most species would be 10 weeks.

When the time comes to try to hatch the eggs just put the peat moss in a shallow pan and add no more than about 2 inches (10 cm) of water. Most eggs will hatch within 24 hours. The fry can be scooped out with a spoon, or caught with a eye dropper, and transferred to a rearing tank.

Nearly all Killifish fry can accept baby brine shrimp as a first food. Micro worms can also be used. They should receive only live foods for the first month or so and then can be weaned over to flakes and frozen fare if necessary.

## **Switch Spawning Killifish**

Switch Spawning Killifish are simply species of Killifish that can be spawned in either the Plant Spawning or Soil Spawning methods. They are just more adaptable. You can try either method with the particular species you are working with and see which method gives you the best results.

Note that when the Plant Spawning method is used the incubation period is usually much shorter, about 2 weeks. But when the Soil Spawning method is used the incubation is longer, up to 6 weeks. The Soil Spawning method can come in handy if you want to collect a lot of eggs and hatch them all at the same time.

Most, if not all, Killifish can be spawned and their eggs collected and placed on top of moist peat moss patties, even the strictly Plant Spawning only types. This sometimes comes in handy if you are having a lot of trouble with fungused eggs. Though with the Strictly Plant Spawners the incubation period remains about the same as normal (2 weeks).



The Blue Gularis is an example of a switch spawning Killifish.

## **Making A Spawning Mop**

Here is a step by step method of making spawning mops for Killifish and other egg laying fish. You'll need a skein of yarn from a craft store or the craft section of a department store. Be sure to get either the acrylic or other man-made type of yarn and not the natural wool type. Before you begin you need to get all your materials and tools together. Your needs are pretty simple for this project, all you need are: A skein of yarn (color is your choice, fish really don't care), a pair of scissors and a medium sized book.



Step 1: Start wrapping the yarn around your book as shown.  
Wrap about 50 times for a good thick mop.



Step 2: Cut the free end of the yarn, and then cut another small piece to use to tie off the yarn in the middle as shown.



Step 3: Tie the yarn together tightly as shown.



Step 4: turn the book over and cut the yarn as shown.



The finished product. easy wasn't it?



I have made 4 mops from this skein already and there is still enough yarn to make several more.

As an added precaution I usually place all the new mops in a microwavable container full of water and heat on high for 1 to 2 minutes. This sterilizes the mops and will show you if the mops may be leaching out some of their dye. I have never had a problem with dye but I still feel better about the mops if I microwave them. I believe this process makes them sink more readily also. If you want your mops to float or stay near the top you can tie on a cork or even use a small pill bottle as a float. I just put one of the strands inside the pill bottle and close the cap over it, thus attaching the mop to the bottle.

## **Feeding Killifish**

Killifish prefer live foods. Frozen foods are a good second best choice. But very few Killies will thrive on flake foods or other dried foods, many will never touch the stuff.

### **Live Foods**

Live foods for Killifish include baby brine shrimp, adult brine shrimp, daphnia, various worm cultures such as grindal worms, white worms and even small earthworms.

Worm cultures can be bought online and are fairly easy to keep going. Almost all Killifish no matter their size will eat baby brine shrimp. Hatching baby brine shrimp from eggs is an easy procedure. Kits can be bought at most modern pet shops.

### **Frozen Foods**

Frozen adult brine shrimp, bloodworms, glassworms and krill are excellent frozen foods for Killifish.

## **Killifish Health**

Killifish are pretty hardy as aquarium fish go. Clean water, frequently changed will go a long way to help assure healthy fish.

Killifish are especially prone to Velvet Disease, also known as Oodinium. This parasitic infection is very similar to Ich, a much more common disease of aquarium fish in general.

The best way to deal with Killifish diseases is to prevent them from happening in the first place. If you don't overcrowd, don't overfeed, do partial water changes at least every 2 weeks and quarantine all new fish and plants then you will have avoided 90% of all fish problems.

In keeping with the KIS way of simplifying Killie care, I normally use only 2 different medicines for treating illnesses. The first one is salt, regular table salt. Added to the water at about 1 teaspoon per gallon. This has been the miracle cure for me. Salt will kill or prevent most parasite problems, helps wounds heal faster and generally makes the fish feel better.

The second miracle cure is copper. The easiest way to use it is to buy an aquarium medicine that contains copper in some form. Copper kills all invertebrates, that includes snails, worms, shrimp, parasites, hydra and a host of other undesirables. With copper the old saying "less is more" is a good rule to follow, never use more than the recommended dosage, a little goes a long way.

Another very important cure for sick fish is CLEAN water. Polluted water is a big fish killer in tanks, and ponds and rivers. A water change can never hurt a sick fish and will usually help the situation a lot.

Try to avoid a chemical soup of medicines. Overuse of medicines has probably killed as many fish as it has saved.

## **Killifish Species Guide**

The following is a selection of Killifish species that I have kept. There are hundreds of species of Killies, this is only a small sample.

## **Aphyosemion Australe**

The Killifish *Aphyosemion australe* (pronounced: af-ee-oh-see-me-on awe-stray-lee) is my all time favorite aquarium fish. I like the shape, color and behavior of this species.

The picture (below) can give you a idea of the beauty of this magnificent little jewel. This is the Red/Orange variety of this fish. There is the original variety that has the natural Tan/Brown color, both varieties have all the colorful markings and long flowing fins.

The Latin or scientific name "*Aphyosemion*" means: fish with a flag or banner, and "*australe*" means: south or southern. The common name for *Aphyosemion australe* is "The Lyretail", of course named for it's elongated tail fin extensions.

Keeping the Lyretail is fairly simple. A pair will do just fine in a one gallon fishbowl. They prefer water that is slightly acid and soft, but they can usually adapt to your local water conditions. Normal room temperature that is comfortable for humans will suit the Lyretail, with no heater needed unless the temperature gets below 68 degrees. Feeding can consist of the regular flake foods and some frozen fish food. But if you intend to spawn them and raise some fry, then some live food will probably be necessary.



*Illustration 1: A male Gold/Orange Aphyosemion australe*

Spawning can be accomplished in several ways. Lyretails, like most Killifish, lay several eggs everyday either in live plants or in the substrate. Since the eggs take about two weeks to hatch you can let a pair spend a couple of weeks in an aquarium and then move them to another aquarium when you notice some fry swimming around. Or you can make some "mops" (strands

of yarn tied together) and let the pair lay their eggs in the mops and collect them to move to another aquarium for hatching. Another way to spawn Lyretails is to put some boiled (sterilized) peat moss in the tank. They will lay their eggs in the peat and you collect the peat, dry it out somewhat, and store it in a plastic bag for about a month. Then you just add some water and get "instant fish".

Regardless of how you get the fry, once you have them they will need some small live foods to get a good start. Most breeders use baby brine shrimp and/or microworms. When they get about two weeks old you can introduce them to frozen and flake foods and gradually wean them over to it.

Raising the Lyretail is not much of a problem. Just change some of their water every couple of weeks and feed a variety of foods and you can look forward to having them around for up to two years, which is their normal life span.

## **Aphyosemion splendopleure**



*Illustration 2: Aphyosemion splendopleure Location - Mayyuka Police Station*

Origin: Cameroon, Africa

Temp: 68 - 80°F (20 - 26.5°C)

pH: 6.5 - 7 dH: Soft

Temperament: Aphyosemion splendopleure is a member of the Chromoaphyosemion group, which is among the most gentle and easy going Killifish. Males might flare up often, but damage is hardly ever done. They are easy on females too, and even make good community tank residents with other peaceful fish. I currently keep my splendopleure with some Peacock Gudgeons and Endlers Livebearers.

Adult Size: Possibly up to 2in (5cm)

Minimum Tank Size: 1 gallon to 2 1/2 gallon bowl for a trio

Feeding: Best results with live foods, but will accept most standard Aquarium food.

Breeding: A Plant Spawning Killifish but also an ideal candidate for a natural set-up. In a tank with plenty of plants and a daily shot of baby brine shrimp you can expect to get plenty of fry. Do remove the larger fry because although the adults don't prey on fry, their older siblings do.

Comments: Aphyosemion splendopleure is a very pretty and enchanting fish. An easy fish to keep and spawn.

## **Aplocheilus lineatus**



*Illustration 3: Golden Wonder Killie - Aplocheilus lineatus*

Origin: India

Adult Size: 4 inches (10cm) and more

Spawning Method: Plant Spawning Killifish

Ease Of Keeping: Very Easy

Notes: A large Killifish with large eggs, 2 week incubation period. A voracious fry eater.

Comments:

*Aplocheilus lineatus* is currently being offered in many petshops as "Golden Wonder" or "Gold Wonder". If you see them they are the same species but have been bred in a color variety that has enhanced gold coloration and suppressed red coloration.

*Aplocheilus lineatus* is a large and colorful Killifish from India and Sri Lanka, it sports glowing gold spangles and red highlights. Similar to a pike in body shape. The males have longer fins and more impressive coloration, while the females and immature males have several vertical black bars on their flanks.

This fish spends most of its time at the surface watching out for flying insects and other live prey, and prefers floating foods. So watch out for any small bite-sized fish placed in a tank with these predators! *A. lineatus* prefers soft slightly acid water with a temperature range of 70-80°F (21-27°C). A tank of at least 10 gallons is adequate.

Breeding this fish is best accomplished with the Mop Method for Plant Spawning Killifish. The Natural System doesn't work well because of their predatory nature. The eggs are large and easily handled. They have an incubation period of 12 to 14 days and the fry are plenty large enough to accept baby brine shrimp as a first food

A. lineatus is an excellent beginners Killifish. It is very hardy and rather long lived for a Killifish, lasting for up to 4 years in some cases. And it's easy to spawn and raise.

## **Blue Gularis**



*Illustration 4: A young male Blue Gularis, his real coloration is much brighter and more vivid than this picture can show.*

Latin Name: *Fundulopanchax sjoestedti*

Origin: Cameroon, Africa

Temp: 68 - 77°F (20 - 25°C)

pH: 6 - 7.5 dH: Soft

Temperament: Agressive

Adult Size: Up to 5 inches (12.5 cm)

Minimum Tank Size: 5 gallons for a pair minimum, bigger is better.

Feeding: Best results with live foods such as earthworms or blackworms, but they will accept frozen and flake food.

Breeding: A Switch Spawning Killifish, with about a 6 week incubation period in water or moist peat. In my experience they have a much better hatch rate using the soil spawning method.

Comments: The Blue Gularis is the "King of the Killifish". [The American Killifish Association](#) uses the Blue Gularis as their club emblem. Being one of the largest and most beautiful Killies the Blue Gularis is a very popular fish among Killifish fans.

Since they are large fish they have a tremendous appetite, feeding a horde of Blue Gularis fry is akin to feeding a room full of teenage boys. The fry grow fast and the males soon start fighting. Its almost impossible to keep 2 males in the same tank.

## **Fundulopanchax gardneri N'Sukka**



*Illustration 5: Male Fundulopanchax gardneri N'Sukka*

Origin: West Africa, Nigeria and Cameroon

Temp: 68 - 86°F (20 - 30°C)

pH: 6.5 - 8 dH: Not critical

Temperament: Somewhat peaceful with fish it's own size and larger. Competing males will put on a dazzling display when courting females.

Adult Size: Up to 2½in (6.25cm)

Minimum Tank Size: 2 gallon to 5 gallons for a trio

Feeding: Best results with live foods, but will eagerly accept most standard Aquarium food.

Breeding: A Switch Spawning Killifish, with a dry incubation of around 3 weeks to a month, or wet incubation 14 to 21 days. N'Sukka is also an excellent Killifish for a natural set-up. Large amounts of fry will appear in a well planted tank.

Comments: May be the best "first Killie" for anyone wanted to get started in the wonderful addictive hobby of keeping and spawning Killifish.

## **Fundulopanchax scheeli**



*Illustration 6: A pair of Fundulopanchax scheeli*

**Origin:** Africa

**Temperature:** 68 - 77°F (20 - 25°C)

**pH:** 6 - 7.5 **dH:** Soft

**Temperament:** Males might sometimes fight. 2 males in the same aquarium will often fight, but if you have a group of males they will usually get along.

**Adult Size:** Up to 2 1/2 in (6.5cm)

**Minimum Tank Size:** 1 gallon to 2 1/2 gallon bowl for a trio

**Feeding:** Best results with live foods, but will accept frozen and some dry food.

**Breeding:** A Switch Spawning Killifish, with about an 2 week incubation period in water and 3 weeks in moist peat.

**Comments:** Fundulopanchax scheeli is a switch spawning Killifish from the streams and marshes of Africa. It is very similar to the Gardneri complex, in appearance and maintenance as it is also easy to keep and spawn.

A pair or trio can be comfortably kept in a 2.5 gallon tank. Scheeli are usually peaceful, but the males are sometimes rough with a single female and if only 2 males are in a tank they will tend to fight. When keeping just about any Killifish it is better to keep either 1 male to a tank or 3 or more to a tank for this reason.

I obtained 2 pairs of scheeli on January 30th, 2002. So far (in one week) I have collected about 50 eggs from 1 pair that I have set-up for spawning. The other pair (pictured on this page) are also spawning but I am going to attempt to let them produce some fry using the "Natural Method".

I am very happy with these fish, they aren't the least bit shy and are always out in the open making a beautiful display.

Special Note: If you want tons of scheeli, set-up a pair with a 5 or 10 gallon tank with an under-gravel filter, feed them good for 2 weeks and watch for an invasion of fry. My breeder pair doesn't eat their fry, but some do, If you have doubts just remove the pair after the 2 week spawning period and raise the fry alone.

## **Fundulosoma thierryi**

**Species/genus:** Fundulosoma thierryi  
Also known as Nothobranchius thierryi

**Origin:** Ghana, Africa

**Temp:** 72-86°F (22-30°C)

**pH:** 7 to 8   **dH:** Not Critical

**Feeding:** By far the best results will come from a diet that includes mainly live foods such as baby brine shrimp, grindal worms, daphnia and mosquito larvae. Dry and even frozen foods are taken with a lot of reluctance.



*Illustration 7: A young pair, female below*

**Breeding:** A Soil Spawning Killifish with an incubation period of from 5 to 12 weeks. The warmer the eggs are incubated the shorter the incubation, with a reasonable minimum of 60F (20C) and a maximum of 86F (30C). Males are very aggressive spawners and either 2 females should be used for each male or plenty of hiding places should be provided for the females protection. The eggs are very large for such small fish but the fry will still need infusoria, green water or lots of Java Moss to supply appropriate sized foods for newly hatched fry. After about a week microworms can be added and baby brine shrimp can be added in another week.

**Temperament:** Although thierryi is a very small species it is an aggressive little spud. As with most Killies the males will fight if there are 2 in a tank but they will establish a "pecking order" if 3 or more males are present. This is my preferred way of keeping them. A tank full of male thierryi will be a beautiful sight. The males will be constantly showing their full color and minor sparring sessions will be the norm.

**Adult Size:** 1¼ in. (3 cm) is about the maximum.

**Minimum Tank Size:** 1 gallon

**Health Comments:** I use up to 2 teaspoons of rock salt per gallon with this fish. F. thierryi is extremely susceptible to "velvet" disease. This concentration of salt will just about eliminate 90% of the health problems with most Soil Spawning Killifish.

## **Nothobranchius guentheri**



*Illustration 8: Male Nothobranchius guentheri*

Origin: Zanzibar Island, Africa

Temp: 68 - 86°F (20 - 30°C)

pH: 6.5 - 8 dH: Medium To Hard

Temperament: Males sometimes fight. 2 males in the same aquarium will just about always fight, but if you have a group of males they will grudgingly get along. Males are quite rough with lone females, standard practice is to use at least 2 females when set-up for spawning.

Adult Size: Up to 2in (5cm)

Minimum Tank Size: 1 gallon to 2 1/2 gallon bowl for a trio

Feeding: Best results with live foods, but will accept most standard Aquarium food.

Breeding: A Soil Spawning Killifish, has a somewhat short incubation period of 8 to 12 weeks. See Nothobranchius Fry Tips - below

Comments: Very pretty fish. An excellent representative of the Soil Spawning Killifish from Africa. A very prolific spawner. Guentheri are a good introduction fish for Soil Spawning Killifish.

Guentheri were the first Killifish that I ever owned, therefore I will always have a special love for them. They are by far the easiest Killy to begin with. Most Killy keepers advise to start with the Plant Spawners, but other than the Gardneri group, I feel that Guentheri is an excellent choice.

### **3 Keys To Raising Nothobranchius Fry**

Raising Nothobranchius fry is in many ways similar to any other fry, but here are 3 tips that are especially helpful with Nothobranchius.

- Nothobranchius fry are very small. Although many of the fry are able to eat baby brine shrimp, most of the smaller fry can't and they will usually turn out to be females. So if you only use BBS to start the fry with you'll probably end up with a lot more males than females. To get around this I usually add some "green water" to the Nothobranchius fry tanks.
- Nothobranchius are sensitive to large water changes. Nothobranchius like clean water just like all fry but they don't do well with large water changes and / or sudden changes in temperature. I use airline tubing and an air valve to make a slow (1 drop per 3 seconds) drip for adding new water. Snails are useful with Nothobranchius fry, they will compact all the fish wastes and excess food into easy to remove packets that can be easily removed with a turkey baster or eye dropper. The key is very small but very frequent water changes.
- Nothobranchius are especially prone to getting Velvet disease. This can be controlled by keeping the water clean and adding 1 teaspoon of rock salt per gallon to their water.

## **Nothobranchius rachovii**



*Illustration 9: A Male Nothobranchius rachovii*

Origin: East Africa

Temp: 68 - 86°F (20 - 30°C)

pH: 6.5 - 8 dH: Medium To Hard

Temperament: Males sometimes fight. 2 males in the same aquarium will just about always fight, but if you have a group of males they will grudgingly get along. Males are quite rough with lone females, standard practice is to use at least 2 females when set-up for spawning.

Adult Size: Up to 2in (5cm)

Minimum Tank Size: 1 gallon to 2 1/2 gallon bowl for a trio

Feeding: Best results with live foods, but will accept most standard Aquarium food.

Breeding: A Soil Spawning Killifish, has a somewhat long incubation period of 16 to 26 weeks.

Comments:

Nothobranchius rachovii is one of the Soil Spawning Killifish that inhabit the temporary rain pools in Africa. Males may achieve a size of 2 inches and have predominantly red scales with some aquablue coloration in between, the aquablue color continues onto the fins which are also white tipped. Females may achieve a size of 1.5 inches and are the normal gray Notho female bland. The eggs may be collected by siphoning the peat moss or coconut fiber thru a fine fishnet or an old piece of ladies panty hose. Squeeze all the excess water out and then store the eggs in a

plastic bag (previously marked with the collection date) for 3 to 6 months. Notho fry are very tiny fry, they will need infusoria or green water to start but will begin eating microworms or baby brine shrimp within a day or 2.

Change a little water every day, but never over 20%. The fry grow very fast.

This is a very difficult Notho for me. It requires a lot of patience and rachovii seems to be very touchy about water quality. Though a difficult fish *Nothobranchius rachovii* makes up for it with it's unbelievable coloration. A picture cannot do justice to the colors of this fish.

## **The End – My Friend**